

EANR

Extension Agriculture and Natural Resources



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Christopher Reisinger
Extension ANR Agent

Viruses in Cucurbits

This year has been shown to have high Soybean Aphid (SBA) activity. There is a lot of information in this newsletter about SBA in soybeans and more will surely come. However, another problem that SBA brings is viruses in cucurbits.

Soybean aphids are very host-specific. Even so, they aren't good at finding their host. The only way they can do this is to stick their snout in a plant and taste it. So the SBA sticks its needle-like snout in all sorts of weeds and other crops looking for soybeans. It only needs a few seconds for the aphid to pick up a virus from an infected plant.

After that, the aphid is like a dirty hypodermic needle, infecting every susceptible plant that it tastes. This is why there is a greater threat of viruses in cucurbits this year. Viral outbreaks so far have coincided with SBA outbreaks. Insecticides won't do much.

The aphids will only be in vegetables for a little bit at any given time. Once the aphid has stuck its mouthparts in the plant, any insecticide treatment will only be a revenge killing.

To protect vegetables from viral infections these are the best precautionary steps to take:

Plant resistant varieties. Talk with your seed supplier about what varieties have virus resistance.

Plant as early as possible. Plants that get a head-start on growth before they are infected will yield more fruit and higher quality fruit.

Make multiple plantings over a series of dates and at different locations on the farm, hoping that the odds will favor some plantings escaping inoculation by migrating aphids.

Plant on reflective mulches. Reflective mulches reduce aphid landing rates.

Use row covers, if practical, to prevent aphid access to young plants. Keep the row covers on as long as possible.

Use high-volume, thorough-coverage applications of stylet oils (such as JMS Stylet Oil or Glacial Oil), especially on seedlings and small plants and before any aphids have reached the plants. Stylet oils do not kill aphids. Instead, they interfere with virus infection. Results of trials that have evaluated stylet oils on a range of crops are *highly* variable – they do not always work.

Since viruses that are transmitted in a non-persistent manner, insecticides applied to the crop (whether applied as soil or seed treatment systemics or as foliar sprays) *will not prevent virus transmission and are a waste of money*. Virus transmission is completed before insecticides kill the aphid vectors.

White Grubs in Soybeans

White grubs have been a problem in wheat and soybeans in years past. The grubs feed on the roots of the plants. They are most commonly found in loose, sandy soil where it is easier for them to dig. High populations are favored by reduced tillage, since tillage destroys their habitat.

Grubs can be spotted by scraping the soil in areas where there is poor emergence or circles of poor stands. Thresholds can vary. In wheat, as little as two grubs per square foot can have a significant reduction in yield.

Ways to prevent grubs include:

- Quick plant emergence.
- Good weed control.
- Kill weeds three weeks prior to planting.
- Use a seed treatment.
- Use a soil insecticide such as Aztec, Force, or Counter.

If grubs are present, tilling in between rows can slow their spread.

Soybean Aphids Spotted

Soybean aphids were found on soybeans in Michigan on May 31 in Berrien County, on the campus of Michigan State University, and at the Beet and Bean Research Farm in Saginaw. Infestation is less than 1% at each location.

When scouting, look for ants on plants to really key in on colonies.

Wheat Disease Update

by Diane Brown-Rytlewski

Powdery Mildew

Powdery mildew is the only wheat foliar disease showing up with any regularity this season, and the amounts of it are quite variable.

On susceptible or highly susceptible varieties, there is a substantial amount of mildew. With the rain and humid weather we have experienced, conditions may be favorable for powdery mildew to come up out of the lower canopy, where the temperatures have been cooler and more humid, and climb up on the flag leaves and heads.

Fungicides registered for powdery mildew control in Michigan differ in how late they can legally be applied. Depending on the growth stage your wheat has attained, it may already be too late to legally use these products.

Stratego (a combination of trifloxystrobin and propiconazole) can be applied up to Feekes growth stage 8 (flag leaf emergence).

Propimax (propiconazole) can be applied up to Feekes growth stage 9 (flag leaf collar visible).

Quilt (a combination of azoxystrobin and propiconazole) and Tilt (propiconazole) can be applied up through heading (Feekes 10.5).

If the wheat is heading, and head scab is a concern, it's probably getting a little late to safely apply strobilurins, but Tilt is an option and quite effective against mildew.

Products registered in Michigan for management of powdery mildew on wheat include: Headline, Propimax, Quadris, Quilt, Stratego and Tilt.

Fusarium Head Blight

Wheat in Michigan is flowering in many parts of the state. The most critical period for scab infection is at flowering, although some risk of infection continues until around the soft dough stage.

We'll likely see flowering in the Thumb area for most wheat. With the recent rains and extended periods of wetness, the risk of scab will be high.

You can access specific information for a weather station location at the Penn State Website at www.wheatscab.psu.edu/. Go to the risk map tool, click on OK. Select the winter wheat model, click on OK. A map of the U.S. will appear.

Click on Michigan. A map of Michigan will appear with the weather station locations, and a Michigan commentary box.

Click on one of the station locations. You will see an indicator bar showing low (green), medium (yellow), or high (red) risk of epidemic conditions for scab.

A graph shows the risk probability for the seven days previous to flowering. The graph information assumes that the current day is the day of flowering.

The next graph shows temperature and rainfall for the last seven days. Click on the arrow next to view model parameters. That will bring up another bar chart that shows you the temperature in number of hours/day when it was favorable for scab (orange bars), the number of hours of rainfall (purple bars), and the number of hours when both the temperature and the relative humidity were in the favorable range for scab (blue bars).

Here, you can determine when conditions were favorable for scab. Although the model uses temperatures between about 48 and 86 degrees F, the most favorable conditions for infection are temperatures between 68 and 86 degrees F, with periods of rainfall longer than 24 hours.

If you are considering a fungicide application as “insurance,” consider whether the yield potential of the field is high enough to justify protection. Fungicide applications protect the yield that is there, but they don’t make up for a poor stand of wheat.

Also consider wheat quality issues and markets. Discount schedules for vomitoxin-contaminated wheat vary, but white wheat tends to be discounted with lower ppm of vomitoxin than red wheat.

We have four products registered for head scab this year. Folicur 3.6F, Muscle 3.6F, and Embrace 3.6L are all tebuconazoles and have Section 18 labels. These products can be applied up until wheat has started to flower (Feekes 10.5.1.)

A new product, Proline, is also a triazole, prothioconazole and has a regular label for head scab and foliar diseases. It can be applied up until 50% flowering (Feekes 10.5.2.)

For best results, fungicides should be applied within one to three days after 75 percent of the wheat is fully headed (the entire head emerged beyond the flag leaf). Depending on the temperature, this timing often corresponds to when 255 or less of the wheat has begun to flower.

For those of you in the Thumb area who want to have a look at the DONCast predictions of vomitoxin

levels in wheat across the lake in Ontario, you can access that Website at www.ontarioweathernetwork.ca/archivemap.cfm. On the Ontario map, the predicted DON levels for heading on May 31 range from under 1 ppm to around 2 ppm.

Soybean Hotline

A new, toll-free soybean hotline will be active this growing season. The toll-free number for the hotline is (888) 201-9301. The purpose of the hotline is to provide Michigan growers with timely crop and pest management information that will help them improve soybean yields and profitability.

Growers can select from six extensions: 1 for insects, 2 for diseases, 3 for weeds, 4 for agronomic information, 5 for soybean cyst nematodes, and 6 for the URL to the Michigan Automated Weather Network.

The recorded messages will be provided by MSU Extension specialists. The messages will not be updated on a rigid schedule and some topic areas will be updated more frequently than others.

Specialists will select topics and decide how long they should stay active, keeping in mind that the goal of the hotline is to present timely and relevant information.

Insect Update

Christina DiFonzo, Entomology

Bean Leaf Beetle

There have been several reports of bean leaf beetle feeding on soybeans. The mild winter likely increased beetle survival.

The beetles feed in alfalfa early in the season, then move to early-planted (first emerging) soybean fields after first-cutting. The adults cause damage by defoliating young plants, leaving small round holes between the leaf veins.

Young soybeans can tolerate and recover from considerable injury (25 to 30 percent defoliation) without loss of yield. Although feeding injury may be common, it is rare to have entire fields in Michigan 30 percent defoliated.

Soybean Aphids

As previously stated, soybean aphid has been found in at least three locations in Michigan: Berrien County, the campus of Michigan State University, and the Bean and Beat Research Farm in Saginaw County. Infestation levels at all locations are less than one percent.

Aphids have been confirmed in east-central Minnesota. Reports are reminiscent of the heavy, early infestation that occurred in southeast Michigan in 2005. In Minnesota, aphids are reported on V1 beans, with 25 percent infestation in some fields.

Postemergence Herbicide Applications in Corn

by David Hillger, Crop and Soil Sciences

For several years, MSU has demonstrated the importance of timely herbicide applications to prevent the loss of yield in corn. We have shown that it is necessary to control weeds before they reach four inches of growth to prevent measurable yield reduction.

Two-pass herbicide applications (pre-emergence followed by post-emergence, or two post-emergence), or timely single post-emergence applications with residual control, are most effective at preserving yield and maximizing gross margin.

Information about the effectiveness and economics of pre-emergence and post-emergence herbicide programs can be found in the three-year summary of *Commercial Herbicide Program Comparisons* found on the MSU Weed Science Website, www.msuweeds.com/publications/.

Herbicide options for total post-emergence weed control are dependent on the hybrid planted in the field and the size of the corn at the time of application.

Several herbicides have height limitations of 12 inches or less, such as atrazine and dicamba, while other herbicides may be applied to taller corn.

Identifying the height and growth stage of the crop is important to prevent possible crop injury. Specific height restrictions for post-emergence herbicides can be found on their label, or in the *2007 Weed Control Guide for Field Crops* (Extension bulletin E-434), in table 1J on page 52.

Timely weed control is important in minimizing yield loss due to weed competition and crop injury due to off-label herbicide applications.

During ideal growing conditions, this window of opportunity may be very small, so it is important to monitor the progress of your crop and scout for weed problems before they cause lasting damage.

SelectMax Labeled for Additional Vegetable Crops

by Bernard Zandstra, Horticulture

SelectMax, a post-emergence graminicide, has been labeled for several additional vegetable crops. It now may be used on asparagus, snap beans, herbs, leafy greens and peas.

The normal use rate for SelectMax is 9-16 fl oz per acre. Use the high rate for control of perennial grasses and annual bluegrass. The pre-harvest interval for asparagus is one day; 21 days for snap beans; 14 days for herbs; 14 days for leafy greens; and 21 days for succulent shelled peas.

SelectMax is a new formulation of clethodim (Select), which may be more active on a volume basis than Select. All the post-emergence grass herbicides have a similar mode of action on grasses, but each is slightly different on each grass weed. It is a good idea to alternate post-emergence grass herbicides when more than one are registered on a crop.

Vegetable Insect Update

by Beth Bishop, Entomology

European Corn Borer

The first European corn borer moths were captured in pheromone traps in southern Michigan. An average of five moths per trap were captured in pheromone traps in Monroe County and 51 moths per trap were captured in Ingham County. In these locations, degree-day accumulations (base 50) have exceeded the required 450 to 500 for the first moth flight.

Locations farther north have not yet reached this threshold, but with the warm weather recently we can expect moth flight to start in many locations.

At this point in the growing season, most sweet corn fields are too small to be attractive to (or to support development of) corn borers. Most females will be laying eggs in field corn.

Aster Leafhopper

Aster leafhoppers have been found in celery and carrot fields in western Michigan. The first samples were submitted last week to Diagnostic Services for testing. Both samples tested negative for aster yellows. We therefore estimate the activity rate to be low – 1 to 1.5 percent. The corresponding treatment thresholds are as follows:

- Celery – 30 to 35 leafhoppers per 100 sweeps.
- Carrots (susceptible varieties) – 40 to 50 leafhoppers per 100 sweeps.
- Carrots (resistant varieties) – 80 to 100 leafhoppers per 100 sweeps.
- Lettuce – 20 to 25 leafhoppers per 100 sweeps.

Potato Leafhoppers

Potato leafhoppers have been reported from potato fields in southeast Michigan. These insects migrate into Michigan early in the season and many colonize alfalfa fields.

As the time for first cutting approaches, potato and snap bean growers should prepare to scout their fields and take action if appropriate. Large numbers of potato leafhoppers may migrate into potatoes and snap beans when alfalfa is cut.

To prevent hopperburn and associated yield reduction in potatoes, treatment threshold is 25

adults per 100 sweeps for adults or 2.5 nymphs per 25 leaves. For snap beans, treatment threshold is one leafhopper per two sweeps (or 4 ft of row) during the seedling stage, and one leafhopper per sweep (or per 5 ft of row) during the trifoliate to bud stage.

Many insecticides are effective against potato leafhopper. Consult the *2007 Insect, Disease, and Nematode Control for Commercial Vegetables* (Extension bulletin E-312) for insecticides registered for control of potato leafhopper on potatoes and snap beans.

Corn Flea Beetle and Stewart's Wilt

by Beth Bishop, Entomology

Stewart's wilt symptoms have been found in a sweet corn field in southwest Michigan. Stewart's wilt is a bacterial disease that is harbored inside of and spread by the corn flea beetle.

Michigan winters are hard on corn flea beetles, and the overwintering survival of the beetle (and the disease) depends on how severe the winter has been. We predicted higher than normal Stewart's wilt infestation this year based on both winter temperatures and a high prevalence of Stewart's wilt symptoms in field corn last fall.

The best prevention against Stewart's wilt in sweet corn is planting resistant varieties. If susceptible varieties are planted when the risk of Stewart's wilt is high, they should be protected with a seed treatment of a neonicotinoid insecticide (Cruiser, Poncho, etc.)

If a susceptible variety was planted without a seed treatment, foliar insecticides can be used for some protection against corn flea beetles.

Growers should scout for flea beetles on a sunny day with little or no wind. (Flea beetles hide on cloudy days or in wind.)

Treatment threshold is six beetles per 100 plants for susceptible varieties, and two per plant for resistant varieties.

A number of foliar insecticides are registered for control of corn flea beetle on sweet corn. Consult the *2007 Insect, Disease, and Nematode Control for Commercial Vegetables* (Extension bulletin E-312) insecticides registered for control of potato leafhopper on potatoes and snap beans.

Because the corn is rapidly growing, thus creating new unprotected foliage, and because beetles move quickly in and out of corn fields, foliar insecticides are not as effective as at plant treatments. Also, corn plants become less susceptible to Stewart's wilt as they grow. Protection is not required after plants reach the 7-leaf stage.

Petiole Sap Nitrate Guidelines

by Darryl Warncke, Crop and Soil Sciences

The total nitrogen or nitrate nitrogen concentration in plant leaf or petiole tissue provides an indication of the nitrogen status of the plant. Many testing labs do tissue analyses for total nitrogen and nitrate nitrogen content of dry plant tissue.

Time is required for sending, drying, grinding, and analysis of the plant tissue. A quicker diagnostic test is the petiole sap nitrate test. Sap is squeezed from petiole tissue, and the nitrate content is determined with a handheld nitrate meter or with nitrate test strips.

Tests can be done frequently to monitor changes in the nitrate status of a crop. Guidelines are available getting an indication of the relative nitrogen status and the potential needing to apply nitrogen.

The nitrate concentration in petiole tissue does gradually decline as the plant goes through various maturation stages. Some decrease in nitrate content is normal.

To do the test, collect 15 to 20 petioles from the area of interest. Chop the petioles into quarter-inch pieces, mix well, and squeeze the juice from a sub-sample. A garlic press works well for expressing the juice.

The table on page 6 provides some general guidelines for various crops at various stages of growth. The actual adequate levels will vary with variety and growing conditions. These guidelines are a compilation of information from California, Florida, and Michigan. Use the first time a petiole sap nitrate test is done on a crop as a benchmark to compare future test results.

MSU Weed Tour

It is that time of the year again! The 2007 Weed Tour will be held on the campus of Michigan State University, East Lansing, on Wednesday, June 27, at the MSU Agronomy Farm

(Continued on page 7)

General Petiole Sap Nitrate Guidelines: (ppm Nitrate x 0.23 = ppm Nitrate N)

| Crop | Stage of Growth | Acceptable Sap Nitrate Conc. (ppm) |
|---------------|------------------------|---|
| Cantaloupe | Early Flower | 4300-5150 |
| Muskmelon | Fruit Bulking | 3400-4300 |
| | First Harvest | 3000-3400 |
| Watermelon | Early Flower | 3900-4700 |
| | Fruit Bulking | 3000-3900 |
| | First Harvest | 2150-3000 |
| Cucumber | First Bloom | 3400-4300 |
| | Fruit 3 inches | 2600-3400 |
| | Harvest | 1700-2600 |
| Carrot | Prior to sizing | 3000-3900 |
| | Up to 0.25 in. | 2150-3000 |
| | 0.25 – 0.5 in. | 1700-2600 |
| | 0.5 – 1.5 in. | 1100-1700 |
| | . 1.5 in root | 850-1300 |
| Celery | Transpl. + 4 wks | 3400-4300 |
| | 5 to 7 wks. | 2600-3400 |
| | 8 to 9 wks. | 1700-2600 |
| | 1 wk prior harvest | 1100-1700 |
| Squash | First Bloom | 3900-4300 |
| | First Harvest | 3400-3900 |
| Pepper | Vegetative | 3900-5150 |
| | Early Flower | 3000-4300 |
| | Fruit Bulking | 3000-3900 |
| | Harvest | 2500-3300 |
| | Fruits half size | 5150-6000 |
| | First Harvest | 3400-4300 |
| | Second Harvest | 2150-3400 |
| Tomato | First Buds | 4300-5150 |
| | First open flowers | 2600-3400 |
| | Fruit 1-2 in. | 1700-2600 |
| | First Harvest | 1300-1700 |
| | Second Harvest | 850-1700 |
| Lettuce | Mid-growth | 1700-2600 |
| | Preharvest | 1300-2150 |
| Onion (roots) | Up to 5 leaves | 3400-4300 |
| | 5 to 7 leaves | 2600-3400 |
| | Bulb Initiation | 1300-2150 |
| | Bulb Bulking | 850-1700 |

(Beaumont Road and Mt. Hope Road).

Registration begins at 9:00 a.m., with the field tour kicking off at 9:30. The tour will provide ample opportunity to look at research plots and participate in some short field presentations. (Be sure to bring a hat and sun screen!)

Participants can compare their favorite corn and soybean herbicide programs to other commercial programs and evaluate the latest weed management strategies. The morning tour ends with lunch.

The afternoon tour will begin at 1:00 p.m. at the MSU Horticulture Farm (College Road, south of Jolly Road) and will include weed control research in horticultural crops.

Pre-registration for the tour is \$25 per person, which includes a tour booklet and a lunch ticket. On-site registration will be \$30.

A flier with a map and registration form is enclosed in this newsletter. For an electronic registration form, or additional information, visit the Website at www.msuweeds.com/.

Optimize N Inputs: Use PSNT

by Darryl Warncke, Crop and Soil Sciences

The greater the time between nitrogen application and the time of greatest nitrogen need by a crop, the greater the risk of nitrogen loss from the rooting zone of the soil.

At the V-6 stage of growth (about 25 days after emergence), a corn crop has only accumulated about 5 percent of the total N it will use. At the V-8 stage, corn is entering a rapid growth phase where nitrogen uptake increases rapidly. By the V-12 stage (approximately 45 days after emergence), the crop has accumulated about 30 percent of its nitrogen need.

During the first five week period after planting corn, significant amounts of nitrogen may be mineralized (released) from the soil organic matter, incorporated crop residues, or manure.

Nitrogen released in the soil is nitrogen that does not need to be applied as fertilizer. The question is how much will be released.

Collecting soil samples near the V-6 stage of growth and having the soil analyzed for the available nitrogen status, gives a good indication of how much the soil is able to supply and how much additional nitrogen is needed.

Field studies over the past several years have shown the PSNT (presidedress soil nitrogen test) to be a reliable indicator of additional nitrogen need and have provided the most economical use of nitrogen resources.

Soil samples for the PSNT should be taken from the zero to 12 inch depth. It is best if one sample, a composite of 15 to 20 cores, represents not more than 20 acres.

A test value of 25 ppm, (about 150 lb N/acre) on a soils basis, at sidedressing time, indicates that there is sufficient nitrogen available in the soil for maximum yield.

The PSNT is a good diagnostic tool for economic nitrogen management. Most all soil testing labs, including the MSU Soil and Plant Nutrient Lab, provide PSNT testing with quick turn-around time – within 48 hours of receiving the sample. The fee for this test ranges from \$9 to \$12.

Economic Returns from Pre-sidedress Nitrate Testing

| PSNT Credits (lbs/A) | Cost Savins on Nitrogen (\$/acre) | Economic Gain (\$/acre) |
|-------------------------|--------------------------------------|----------------------------|
| 30 | 8.70 | 5.70 |
| 60 | 17.40 | 14.40 |
| 90 | 26.10 | 23.10 |
| 120 | 34.80 | 31.30 |

Source: Dr. Carrie Laboski

Assumptions: Nitrogen cost is \$0.29/lb of nitrogen.

Sampling and analysis costs are \$3/acre.

Farmer's Market Opportunity

MSU Extension and the PDA have found a spot to have a one day Farmer's Market during the Be-Cool Car Show on Saturday, July 14. Interested vendors should contact Chris Reisinger at (989) 895-4026 as soon as possible because space is limited. There will be a minimal staff fee.

Probabilities of Realizing an Economic Return from Nitrification Inhibitors

| | — Time of Nitrogen Application — | | |
|-----------------------|----------------------------------|-------------------|------------|
| Soil Management Group | Early Spring < 50 F | Late Spring >50 F | Side Dress |
| Clays (0,1) | Good-Fair | Poor-Fair | Poor |
| Clay loams (1.5) | Fair-Good | Poor-Fair | Poor |
| Loams (2.5) | Fair | Fair | Poor |
| Sandy Loams (3) | Fair | Fair | Poor |
| Loamy Sands (4) | Fair | Fair | Poor |
| Sands (5) | Fair-Poor | Fair | Poor |

Key: Good = Economic response expected at least 60% of the time; Fair = Economic response expected 40 to 50% of the time; Poor = Economic response expected less than 30% of the time. **Source:** *Nutrient Management to Protect Water Quality*.

Fungicides Approves (Section 18) or Registered (Section 3) for Soybean Rust Management in Michigan

| Active Ingredient | Product (Trade Name) | Section 18 Start Date | Section 18 Expiration | Section 3 Registration Status |
|---------------------------------|----------------------|--|-----------------------|---|
| azoxystrobin | Quadris | None | None | Registered |
| azoxystrobin + propiconazole | Quilt | Covers use in 2005, 2006, and 2007 growing seasons. | Expires 11/10/07 | See propiconazole. |
| chlorothalonil | Bravo, Echo, Equus | None | None | Registered |
| flutriafol | Topguard | New for 2007. Covers use in 2007, 2008, and 2009 growing seasons. | Expires 2/12/10 | Registration decision expected in 2009. |
| myclobutanil | Laredo EC | Covers use in 2005, 2006, and 2007 growing seasons. | Expires 11/10/07 | Tolerance approved. Registration decision expected in early 2007. |
| propiconazole | Tilt | Covers use in 2005, 2006, and 2007 growing seasons. | Expires 11/10/07 | Registered by final label is being reworted. |
| | PropiMax | | | |
| | Bumper | | | |
| propiconazole + trifloxystrobin | Stratego | Covers use in 2005, 2006, and 2007 growing seasons. | Expires 11/10/07 | Registered but final label is being reworted. |
| pyraclostrobin | Headline | None | None | Registered |
| tebuconazole | Folicur | Covers use in 2005, 2006, and 2007 growing seasons. | Expires 11/10/07 | Registration decision expected in mid 2007 |
| | Orius | | | |
| tebuconazole + pyraclostrobin | Headline SBR | Covers use in 2005, 2006, and 2007 growing seasons. | Expires 11/10/07 | Not submitted for Section 3 registration. |
| tetraconazole | Domark | Covers use in 2005, 2006, and 2007 growing seasons. Two applications/season requested. | expires 11/10/07 | Registered as of 4/4/07. Note: Rates have been decreased on the Section 3 label to 4-5 fl oz/A (from 4-6 fl oz/A) with a maximum of two applications. |

Thanks to Kent L. Smith, Plant Pathologist, UDSA, ARS, AO Office of Pest Management Policy; Marty Draper, National Program Leader, Plant Pathology, CSREES; and Brian Hughes, Product Registration Manager, Michigan Department of Agriculture for supplying the information in this table.

2007 MSU Weed Tours

Wednesday, June 27

Departments of Crop and Soil Sciences and Horticulture

Michigan State University

Schedule of Events

9:00-9:30 am Registration - Coffee and Doughnuts
Location: Crops Field Lab (Beaumont Road and Mt. Hope Road), MSU Campus

9:30-11:30 am Weed Control in Corn and Soybeans
Location: Crops Field Lab (Beaumont Road and Mt. Hope Road), MSU Campus

11:30-1:00 pm Lunch

1:00-3:00 pm Weed Control in Horticultural Crops
Location: MSU Horticulture Farm (College Road, south of Jolly Road)

CREDIT: Recertification credits have been requested for Private and Commercial
1A and 1B Pesticide Applicators and Certified Crop Advisors.

| Name - Please also indicate registrant name(s) on check. | A.M. Crops | P.M. Hort | Registration |
|--|---------------|--------------|--------------|
| | | | |
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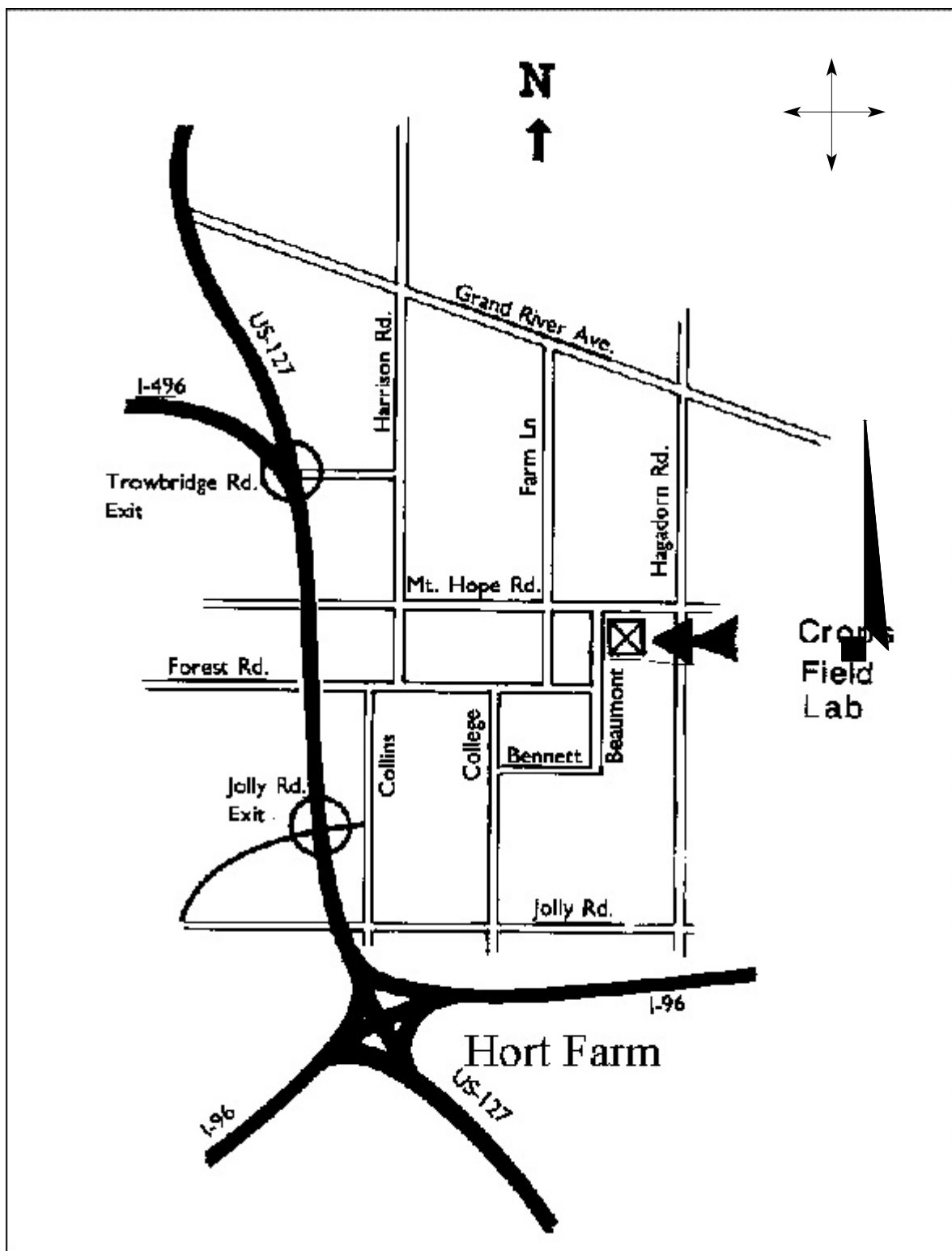
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For more information visit our web site at www.msuweeds.com, or call Ph#517-355-0271 x1112, Email: misiak@msu.edu

Return the bottom half of this form by Friday, June 22 to:

2007 MSU Weed Tour
Dept. of Crop and Soil Sciences
286 D88B, Michigan State University
East Lansing, MI 48824-1325
Fax#517-353-3955



INFORMATION:

Christy Sprague: 517-355-0271 x1224

Deb Misiak: 517-355-0271 x1112

Fax: 517/353-3955

Email: misiak@msu.edu, Web site: www.msuweeds.com

Mailing Address:

Crop and Soil Sciences Department, Michigan State University
East Lansing, MI 48824-1325

Soybean Hotline

1-888-201-9301



- Toll Free Number
- Recorded Information
- Up-To-Date Information
- MSU Campus Specialists

SELECT:

- 1- Insects
- 2- Diseases
- 3- Weeds
- 4- Agronomic Information
- 5- SCN
- 6- Local Weather Information



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